

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RLL-496WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IB2005/000512	International filing date (day/month/year) 28/02/2005	(Earliest) Priority Date (day/month/year) 27/02/2004
Applicant RANBAXY LABORATORIES LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 10 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☒ Certain claims were found unsearchable (See Box II).

3. ☒ Unity of invention is lacking (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07D417/12 A61K31/496 A61P25/18		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07D A61K A61P		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, CHEM ABS Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 831 031 A (LOWE, III ET AL) 16 May 1989 (1989-05-16) cited in the application column 2, line 25 - line 48; example 16	1-4
A	US 5 338 846 A (BUSCH ET AL) 16 August 1994 (1994-08-16) cited in the application column 1; claims 1-19; examples 1-3	1-4
A	EP 0 584 903 A (PFIZER INC) 2 March 1994 (1994-03-02) cited in the application the whole document & US 5 206 366 A 27 April 1993 (1993-04-27)	1-4
-/-		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		<input checked="" type="checkbox"/> Patent family members are listed in annex.
* Special categories of cited documents : *A* document defining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) *O* document referring to an oral disclosure, use, exhibition or other means *P* document published prior to the international filing date but later than the priority date claimed *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. *S* document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
2 September 2005		09.09.2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2200 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Rufet, J

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 150 366 A (ARENSON ET AL) 21 November 2000 (2000-11-21) cited in the application abstract -----	1
X	WO 03/070246 A (PFIZER PRODUCTS INC) 28 August 2003 (2003-08-28) claims 1-3; examples 1,2 -----	5,6,8, 12-14, 17,18, 20-26, 28-31
X	EP 0 586 191 A (PFIZER INC) 9 March 1994 (1994-03-09) claims 1-6; examples 1-3 -----	22-31
X	US 6 110 918 A (BUSCH ET AL) 29 August 2000 (2000-08-29) example 1 -----	5,6,8, 12,13, 17-21
X	EP 0 965 343 A (PFIZER PRODUCTS INC) 22 December 1999 (1999-12-22) claims 1,13-16; example 10 -----	5,20-23, 27-31
P,X	WO 2004/089948 A (HETERO DRUGS LIMITED; PARTHASARADHI, REDDY, BANDI; RATHNAKAR, REDDY, K) 21 October 2004 (2004-10-21) claims 1-17; examples 1-4 -----	22-31
P,X	WO 2004/050655 A (DR. REDDY'S LABORATORIES LIMITED; DR. REDDY'S LABORATORIES INC; REDDY,) 17 June 2004 (2004-06-17) examples 1,2 -----	5-7,12, 14,17-23
P,X	WO 2005/016325 A (TEVA PHARMACEUTICAL INDUSTRIES LTD; TEVA PHARMACEUTICALS USA, INC; MEN) 24 February 2005 (2005-02-24) claims 1-50; examples 3-7,10,11,13 -----	22-31

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2005/000512

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 31
because they relate to subject matter not required to be searched by this Authority, namely:
Although claim 31 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4

Alternative process for the preparation of ziprasidone base

2. claims: 5-21

Alternative process for the preparation of substantially
pure ziprasidone base

3. claims: 22-31

Alternative process for the preparation of substantially
pure ziprasidone hydrochloride, pharmaceutical composition
and uses thereof

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4831031	A	16-05-1989	US 4883795 A	28-11-1989
US 5338846	A	16-08-1994	US 5206366 A	27-04-1993
			US 5312925 A	17-05-1994
			CA 2095587 A1	27-02-1994
			AT 273976 T	15-09-2004
			AT 206422 T	15-10-2001
			AU 642836 B1	28-10-1993
			BR 9302065 A	26-07-1994
			CN 1083061 A ,C	02-03-1994
			CZ 9300877 A3	13-04-1994
			DE 69330853 D1	08-11-2001
			DE 69330853 T2	02-05-2002
			DE 69333597 D1	23-09-2004
			DK 584903 T3	03-12-2001
			EG 20214 A	30-11-1997
			EP 1029861 A1	23-08-2000
			EP 0584903 A1	02-03-1994
			ES 2225015 T3	16-03-2005
			ES 2161703 T3	16-12-2001
			FI 932012 A	27-02-1994
			HU 65750 A2	28-07-1994
			IL 105622 A	15-06-1998
			JP 2742370 B2	22-04-1998
			JP 6184143 A	05-07-1994
			KR 123441 B1	24-11-1997
			MX 9302813 A1	28-02-1994
			NO 931656 A	28-02-1994
			NZ 247539 A	26-09-1995
			PL 299002 A1	21-03-1994
			PT 1029861 T	30-11-2004
			PT 584903 T	28-02-2002
			RU 2061695 C1	10-06-1996
			SI 9300287 A	31-03-1994
			SK 48593 A3	06-04-1994
			ZA 9306225 A	27-02-1995
			AU 657231 B2	02-03-1995
			AU 4600493 A	16-06-1994
			BR 9303014 A	15-03-1994
			CA 2105114 A1	02-03-1994
			CN 1089607 A ,C	20-07-1994
			CZ 9301789 A3	13-04-1994
			DE 9312903 U1	05-01-1994
			EG 20251 A	31-05-1998
			EP 0586191 A1	09-03-1994
			FI 933804 A	02-03-1994
			HU 67023 A2	30-01-1995
			IL 106777 A	15-04-1997
			JP 2742372 B2	22-04-1998
			JP 6157521 A	03-06-1994
			MX 9305277 A1	31-03-1994
			NO 933093 A	02-03-1994
EP 0584903	A	02-03-1994	US 5206366 A	27-04-1993
			AT 273976 T	15-09-2004
			AT 206422 T	15-10-2001
			AU 642836 B1	28-10-1993
			BR 9302065 A	26-07-1994

Patent document cited in search report		Publication date	Patent family member(s)	Publication date		
EP 0584903	A		CA 2095587 A1	27-02-1994		
			CN 1083061 A ,C	02-03-1994		
			CZ 9300877 A3	13-04-1994		
			DE 69330853 D1	08-11-2001		
			DE 69330853 T2	02-05-2002		
			DE 69333597 D1	23-09-2004		
			DK 584903 T3	03-12-2001		
			EG 20214 A	30-11-1997		
			EP 1029861 A1	23-08-2000		
			EP 0584903 A1	02-03-1994		
			ES 2225015 T3	16-03-2005		
			ES 2161703 T3	16-12-2001		
			FI 932012 A	27-02-1994		
			HU 65750 A2	28-07-1994		
			IL 105622 A	15-06-1998		
			JP 2742370 B2	22-04-1998		
			JP 6184143 A	05-07-1994		
			KR 123441 B1	24-11-1997		
			MX 9302813 A1	28-02-1994		
			NO 931656 A	28-02-1994		
			NZ 247539 A	26-09-1995		
			PL 299002 A1	21-03-1994		
			PT 1029861 T	30-11-2004		
			PT 584903 T	28-02-2002		
			RU 2061695 C1	10-06-1996		
			SI 9300287 A	31-03-1994		
			SK 48593 A3	06-04-1994		
			US 5338846 A	16-08-1994		
			ZA 9306225 A	27-02-1995		
		US 5206366	A	27-04-1993	AT 273976 T	15-09-2004
					AT 206422 T	15-10-2001
					AU 642836 B1	28-10-1993
	BR 9302065 A			26-07-1994		
	CA 2095587 A1			27-02-1994		
	CN 1083061 A ,C			02-03-1994		
	CZ 9300877 A3			13-04-1994		
	DE 69330853 D1			08-11-2001		
	DE 69330853 T2			02-05-2002		
	DE 69333597 D1			23-09-2004		
	DK 584903 T3			03-12-2001		
	EG 20214 A			30-11-1997		
	EP 1029861 A1			23-08-2000		
	EP 0584903 A1			02-03-1994		
	ES 2225015 T3			16-03-2005		
	ES 2161703 T3			16-12-2001		
	FI 932012 A			27-02-1994		
	HU 65750 A2			28-07-1994		
	IL 105622 A			15-06-1998		
	JP 2742370 B2			22-04-1998		
	JP 6184143 A			05-07-1994		
	KR 123441 B1			24-11-1997		
	MX 9302813 A1			28-02-1994		
	NO 931656 A			28-02-1994		
	NZ 247539 A			26-09-1995		
	PL 299002 A1			21-03-1994		
	PT 1029861 T			30-11-2004		
	PT 584903 T			28-02-2002		

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5206366	A		RU 2061695 C1	10-06-1996
			SI 9300287 A	31-03-1994
			SK 48593 A3	06-04-1994
			US 5338846 A	16-08-1994
			ZA 9306225 A	27-02-1995
US 6150366	A	21-11-2000	AP 1216 A	19-10-2003
			AT 240732 T	15-06-2003
			AU 753820 B2	31-10-2002
			AU 3398399 A	23-12-1999
			BG 103489 A	31-07-2000
			BR 9902268 A	02-05-2000
			CA 2274338 A1	15-12-1999
			DE 69908021 D1	26-06-2003
			DE 69908021 T2	27-11-2003
			DK 965343 T3	04-08-2003
			EA 2223 B1	28-02-2002
			EP 0965343 A2	22-12-1999
			ES 2197581 T3	01-01-2004
			HR 990193 A1	29-02-2000
			HU 9901960 A2	28-08-2000
			ID 23546 A	04-05-2000
			IL 130424 A	31-10-2003
			JP 3441676 B2	02-09-2003
			JP 2000007566 A	11-01-2000
			JP 2002003492 A	09-01-2002
			KR 2000006143 A	25-01-2000
			MA 26647 A1	20-12-2004
			NO 992892 A	16-12-1999
			NZ 336271 A	27-10-2000
			OA 11064 A	13-03-2002
			PL 333737 A1	20-12-1999
			PT 965343 T	29-08-2003
			SG 77243 A1	19-12-2000
			SI 965343 T1	31-10-2003
			SK 76999 A3	11-12-2000
			TR 9901379 A2	21-01-2000
			TW 590774 B	11-06-2004
			ZA 9903938 A	14-12-2000
WO 03070246	A	28-08-2003	AU 2003206035 A1	09-09-2003
			BR 0307833 A	07-12-2004
			CA 2475302 A1	28-08-2003
			CN 1635892 A	06-07-2005
			EP 1476162 A1	17-11-2004
			HR 20040711 A2	31-12-2004
			WO 03070246 A1	28-08-2003
			MA 27177 A1	03-01-2005
			US 2004048876 A1	11-03-2004
EP 0586191	A	09-03-1994	US 5312925 A	17-05-1994
			AU 657231 B2	02-03-1995
			AU 4600493 A	16-06-1994
			BR 9303014 A	15-03-1994
			CA 2095587 A1	27-02-1994
			CA 2105114 A1	02-03-1994
			CN 1089607 A ,C	20-07-1994
			CZ 9301789 A3	13-04-1994

INTERNATIONAL SEARCH REPORT

International Application No

Information on patent family members

PCT/IB2005/000512

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0586191	A		DE 9312903 U1	05-01-1994
			EG 20251 A	31-05-1998
			EP 0586191 A1	09-03-1994
			FI 933804 A	02-03-1994
			HU 67023 A2	30-01-1995
			IL 106777 A	15-04-1997
			JP 2742372 B2	22-04-1998
			JP 6157521 A	03-06-1994
			MX 9305277 A1	31-03-1994
			NO 933093 A	02-03-1994
			NZ 248543 A	26-07-1995
			PL 300235 A1	05-04-1994
			PL 174396 B1	31-07-1998
			RU 2081116 C1	10-06-1997
			TW 422845 B	21-02-2001
			US 5338846 A	16-08-1994
			ZA 9306394 A	28-02-1995
US 6110918	A	29-08-2000	AT 236902 T	15-04-2003
			AU 730856 B2	15-03-2001
			AU 1936897 A	26-11-1997
			BG 63601 B1	28-06-2002
			BG 102893 A	30-09-1999
			BR 9708932 A	03-08-1999
			CA 2252895 A1	13-11-1997
			DE 69720719 D1	15-05-2003
			DE 69720719 T2	06-11-2003
			DK 904273 T3	07-07-2003
			EA 1180 B1	30-10-2000
			EP 0904273 A1	31-03-1999
			HK 1017893 A1	07-03-2003
			HU 9902808 A2	28-03-2000
			IL 126590 A	25-11-2001
			JP 3102896 B2	23-10-2000
			JP 11509865 T	31-08-1999
			NO 985193 A	06-11-1998
			NZ 332219 A	25-02-2005
			PL 329880 A1	12-04-1999
			SI 904273 T1	31-08-2003
			SK 150598 A3	13-03-2000
			AP 838 A	03-05-2000
			CN 1216990 A ,C	19-05-1999
			CZ 9803494 A3	15-09-1999
			ES 2192264 T3	01-10-2003
			HR 970235 A1	30-06-1998
			WO 9742190 A1	13-11-1997
			ID 17504 A	08-01-1998
			KR 2000010822 A	25-02-2000
			MA 26427 A1	20-12-2004
			NZ 508303 A	27-07-2001
			OA 10908 A	26-10-2001
			PT 904273 T	30-06-2003
			TR 9802241 T2	22-02-1999
			TW 427989 B	01-04-2001
			ZA 9703875 A	06-11-1998
EP 0965343	A	22-12-1999	AP 1216 A	19-10-2003
			AT 240732 T	15-06-2003

INTERNATIONAL SEARCH REPORT

International Application No

Information on patent family members

PCT/IB2005/000512

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0965343	A	AU 753820 B2	31-10-2002
		AU 3398399 A	23-12-1999
		BG 103489 A	31-07-2000
		BR 9902268 A	02-05-2000
		CA 2274338 A1	15-12-1999
		DE 69908021 D1	26-06-2003
		DE 69908021 T2	27-11-2003
		DK 965343 T3	04-08-2003
		EA 2223 B1	28-02-2002
		EP 0965343 A2	22-12-1999
		ES 2197581 T3	01-01-2004
		HR 990193 A1	29-02-2000
		HU 9901960 A2	28-08-2000
		ID 23546 A	04-05-2000
		IL 130424 A	31-10-2003
		JP 3441676 B2	02-09-2003
		JP 2000007566 A	11-01-2000
		JP 2002003492 A	09-01-2002
		KR 2000006143 A	25-01-2000
		MA 26647 A1	20-12-2004
		NO 992892 A	16-12-1999
		NZ 336271 A	27-10-2000
		OA 11064 A	13-03-2002
		PL 333737 A1	20-12-1999
		PT 965343 T	29-08-2003
		SG 77243 A1	19-12-2000
		SI 965343 T1	31-10-2003
		SK 76999 A3	11-12-2000
		TR 9901379 A2	21-01-2000
		TW 590774 B	11-06-2004
		US 6150366 A	21-11-2000
		ZA 9903938 A	14-12-2000
WO 2004089948	A	21-10-2004	
		WO 2004089948 A1	21-10-2004
		AU 2003245027 A1	01-11-2004
		US 2005143396 A1	30-06-2005
WO 2004050655	A	17-06-2004	
		WO 2004050655 A1	17-06-2004
WO 2005016325	A	24-02-2005	
		EP 1530570 A2	18-05-2005
		EP 1546146 A1	29-06-2005
		US 2005059680 A1	17-03-2005
		US 2005043324 A1	24-02-2005
		WO 2005016325 A2	24-02-2005
		WO 2005035531 A1	21-04-2005